

- 1.** A method comprising:

deducing a signal strength of a first signal,  $R_D$ , at a wireless terminal based on a transmit strength of a second signal,  $T_U$ , that is transmitted by said wireless terminal; and

estimating the location of said wireless terminal based on said signal strength of said first signal,  $R_D$ .
- 2.** The method of claim 1 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a transmit strength of said first signal,  $T_D$ .
- 3.** The method of claim 1 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a signal-strength measurement for said second signal,  $R_U$ , at the location where said first signal is transmitted.
- 4.** The method of claim 1 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on an attenuation for said second signal,  $A_U$ , between said wireless terminal and the location where said first signal is transmitted.
- 5.** The method of claim 1 wherein estimating the location of said wireless terminal comprises pattern matching said signal strength of said first signal,  $R_D$ , against a database that associates candidate locations for said wireless terminal with predicted signal-strength measurements for said first signal.
- 6.** The method of claim 1 wherein estimating the location of said wireless terminal is also based on a signal-strength measurement of a third signal,  $R_I$ , at said wireless terminal.
- 7.** The method of claim 6 wherein estimating the location of said wireless terminal is based on said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .
- 8.** The method of claim 6 wherein estimating the location of said wireless terminal is based on the absolute magnitude of the difference between said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .
- 9.** The method of claim 6 wherein estimating the location of said wireless terminal comprises generating a two-dimensional probability distribution for the location of said wireless terminal based on the absolute magnitude of the difference between said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**10.** A method comprising:

deducing a signal strength of a first signal,  $R_D$ , at a wireless terminal based on a signal-strength measurement of a second signal,  $R_U$ , at the location where said first signal is transmitted; and

estimating the location of said wireless terminal based on said signal strength of said first signal,  $R_D$ .

**11.** The method of claim 10 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a transmit strength of said first signal,  $T_D$ .

**12.** The method of claim 10 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a transmit strength of said second signal,  $T_U$ , that is transmitted by said wireless terminal.

**13.** The method of claim 10 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on an attenuation for said second signal,  $A_U$ , between said wireless terminal and the location where said first signal is transmitted.

**14.** The method of claim 10 wherein estimating the location of said wireless terminal comprises pattern matching said signal strength of said first signal,  $R_D$ , against a database that associates candidate locations for said wireless terminal with predicted signal-strength measurements for said first signal.

**15.** The method of claim 10 wherein estimating the location of said wireless terminal is also based on a signal-strength measurement of a third signal,  $R_I$ , at said wireless terminal.

**16.** The method of claim 15 wherein estimating the location of said wireless terminal is based on said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**17.** The method of claim 15 wherein estimating the location of said wireless terminal is based on the absolute magnitude of the difference between said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**18.** The method of claim 15 wherein estimating the location of said wireless terminal comprises generating a two-dimensional probability distribution for the location of said wireless terminal based on the absolute magnitude of the difference between said signal

strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**19.** The method of claim 10 further comprising removing the effects of fast fading on  $R_U$ .

**20.** A method comprising:

deducing a signal strength of a first signal,  $R_D$ , at a wireless terminal based on an attenuation of a second signal,  $A_U$ , that is transmitted by said wireless terminal; and

estimating the location of said wireless terminal based on said signal strength of said first signal,  $R_D$ .

**21.** The method of claim 20 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a transmit strength of said first signal,  $T_D$ .

**22.** The method of claim 20 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a signal-strength measurement for said second signal,  $R_U$ , at the location where said first signal is transmitted.

**23.** The method of claim 20 wherein deducing said signal strength of said first signal,  $R_D$ , is also based on a transmit strength of said second signal,  $T_U$ .

**24.** The method of claim 20 wherein estimating the location of said wireless terminal comprises pattern matching said signal strength of said first signal,  $R_D$ , against a database that associates candidate locations for said wireless terminal with predicted signal-strength measurements for said first signal.

**25.** The method of claim 20 wherein estimating the location of said wireless terminal is also based on a signal-strength measurement of a third signal,  $R_I$ , at said wireless terminal.

**26.** The method of claim 25 wherein estimating the location of said wireless terminal is based on said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**27.** The method of claim 25 wherein estimating the location of said wireless terminal is based on the absolute magnitude of the difference between said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .

**28.** The method of claim 25 wherein estimating the location of said wireless terminal comprises generating a two-dimensional probability distribution for the location of said wireless terminal based on the absolute magnitude of the difference between said signal strength of said first signal,  $R_D$ , and said signal-strength measurement of said third signal,  $R_I$ .